

WHAT IS CLAIMED IS:

1. A method comprising:

- a) obtaining at least a first nuclease inhibitor;
- b) obtaining at least a second nuclease inhibitor;
- c) obtaining a composition; and
- d) admixing the nuclease inhibitors and the composition;

wherein nucleases that may be present in the composition are inhibited.

2. The method of claim 1, wherein admixing is further defined as comprising mixing the first and second nuclease inhibitors to form a nuclease inhibitor cocktail and mixing the nuclease inhibitor cocktail with the composition.

3. The method of claim 1, wherein obtaining the first and second nuclease inhibitors comprises obtaining a nuclease inhibitor cocktail comprising the first nuclease inhibitor and the second nuclease inhibitor.

4. The method of claim 1, wherein the composition comprises at least one nuclease.

5. The method of claim 1, wherein the composition comprises RNA.

6. The method of claim 1, wherein the composition is further defined as an *in vitro* translation reaction.

7. The method of claim 1, wherein the composition is a reagent used in molecular biology.

8. The method of claim 1, wherein the first nuclease inhibitor is an anti-nuclease antibody.

9. The method of claim 8, wherein the first anti-nuclease antibody is a polyclonal antibody.

10. The method of claim 8, wherein the anti-nuclease antibody is an anti-ribonuclease antibody.

11. The method of claim 10, wherein the anti-ribonuclease antibody is capable of binding to one or more of RNase A, a member of the RNase A family, RNase B, RNase C, RNase 1, RNase T1, RNase T2, RNase L, a member of the RNase H family, a member of the angiogenin RNase family, eosinophil RNase, a micrococcal nuclease, a member of the mammalian ribonuclease 1 family, a member of the ribonuclease 2 family, a messenger RNA ribonuclease, 5'-3' exoribonuclease, 3'-5' exoribonuclease, a decapping enzyme, a deadenylase, RNase P, RNase III, RNase E, RNase I, I*, RNase HI, RNase HII, RNase M, RNase R, RNase IV, F; RNase P2, O, PIV, PC, RNase N, RNase II, PNPase, RNase D, RNase BN, RNase T, RNase PH, OligoRNase, RNase R, RNase Sa, RNase F1, RNase U2, RNase Ms, or RNase St.

12. The method of claim 10, wherein the anti-ribonuclease antibody is an anti-RNase A antibody.

13. The method of claim 10, wherein the anti-ribonuclease antibody is an anti-RNase 1 antibody.

14. The method of claim 10, wherein the anti-ribonuclease antibody is an anti-RNase T1 antibody.

15. The method of claim 8, wherein the anti-nuclease antibody is an anti-deoxyribonuclease antibody.

16. The method of claim 8, wherein first anti-nuclease antibody is capable of binding

Sub A2
to S1 nuclease or micrococcal nuclease.

17. The method of claim 8, wherein the second nuclease inhibitor is a second anti-nuclease antibody.

5
Sub A3
18. The method of claim 17, wherein at least a third anti-nuclease antibody is obtained and admixed with the first and second anti-nuclease antibodies and the composition.

10 19. The method of claim 18, comprising obtaining at least an anti-RNase A antibody, an anti-RNase 1 antibody, and an anti-RNase T1 antibody and admixing them with the composition.

Sub A4
20. The method of claim 1, wherein the second nuclease inhibitor is human placental ribonuclease inhibitor, a bovine ribonuclease inhibitor, a porcine ribonuclease inhibitor, diethyl pyrocarbonate, ethanol, formamide, guanidinium thiocyanate, vanadyl-ribonucleoside complexes, macaloid, sodium dodecyl sulfate, ethylenediamine tetraacetic acid, proteinase K, heparin, hydroxylamine-oxygen-cupric ion, bentonite, ammonium sulfate, dithiothreitol, β -mercaptoethanol, cysteine, dithioerythritol, tris (2-carboxyethyl) phosphene hydrochloride, Mg^{+2} , Mn^{+2} , Zn^{+2} , Fe^{+2} , Ca^{+2} , or Cu^{+2} .

21. The method of claim 20, wherein the nuclease inhibitor is human placental ribonuclease inhibitor.

25 22. The method of claim 20, wherein the first nuclease inhibitor is an anti-nuclease antibody.

Sub A5
30 23. The method of claim 1, further defined as a method of inhibiting nucleases in the composition.

24. A solution comprising at least a first nuclease inhibitor and a second nuclease inhibitor.

25. The solution of claim 24, further comprising a nucleic acid molecule.

26. The solution of claim 24, in which the solution is a reagent used in molecular biology.

27. The solution of claim 24, wherein the first nuclease inhibitor is an anti-nuclease antibody.

28. The solution of claim 27, wherein the first anti-nuclease antibody is a anti-ribonuclease antibody.

29. The solution of claim 28, wherein the anti-ribonuclease antibody is an anti-RNase A antibody, an anti-RNase 1 antibody, or an anti-RNase T1 antibody.

30. The solution of claim 27, wherein the first anti-nuclease antibody is an anti-deoxyribonuclease antibody.

31. The solution of claim 27, wherein first anti-nuclease antibody is capable of binding to S1 nuclease or micrococcal nuclease.

32. The solution of claim 27, wherein the second nuclease inhibitor is a second anti-nuclease antibody.

33. The solution of claim 24, comprising at least an anti-RNase A antibody, an anti-RNase 1 antibody, and an anti-RNase T1 antibody.

34. The solution of claim 33, further defined as comprising an anti-RNase II antibody,

an anti-eosinophil antibody, and an anti-angiogenin antibody

35. The solution of claim 24, wherein the second nuclease inhibitor is human placental ribonuclease inhibitor, a bovine ribonuclease inhibitor, a porcine ribonuclease inhibitor, diethyl pyrocarbonate, ethanol, formamide, guanidinium thiocyanate, vanadyl-
5 ribonucleoside complexes, macaloid, sodium dodecyl sulfate, ethylenediamine tetraacetic acid, proteinase K, heparin, hydroxylamine-oxygen-cupric ion, bentonite, ammonium sulfate, dithiothreitol, β -mercaptoethanol, cysteine, dithioerythritol, tris (2-carboxyethyl) phosphene hydrochloride, Mg^{+2} , Mn^{+2} , Zn^{+2} , Fe^{+2} , Ca^{+2} , or Cu^{+2} .

10

36. The solution of claim 35, wherein the first nuclease inhibitor is an anti-nuclease antibody.

37. A method of performing *in vitro* translation comprising obtaining a first nuclease inhibitor, which inhibitor is further defined as an anti-nuclease antibody, and placing the anti-nuclease antibody in an *in vitro* translation reaction.

38. The method of claim 37, wherein the *in vitro* translation reaction comprises at least one nuclease.

20

39. The method of claim 37, wherein the *in vitro* translation reaction comprises RNA.

40. The method of claim 37, wherein the *in vitro* translation reaction is further defined as a transcription/translation reaction.

25

41. The method of claim 40, wherein the *in vitro* translation reaction comprises both DNA and RNA.

42. The method of claim 37, wherein the anti-nuclease antibody is a anti-ribonuclease
30 antibody.

43. The method of claim 37, wherein the anti-nuclease antibody is an anti-deoxyribonuclease antibody.

44. The method of claim 37, wherein the anti-nuclease antibody is capable of binding to S1 nuclease or micrococcal nuclease.

45. The method of claim 37, further comprising obtaining a second nuclease inhibitor and placing the second nuclease inhibitor in the *in vitro* translation reaction.

46. The method of claim 45, further defined as comprising obtaining a nucleic inhibitor cocktail comprising at least the anti-nuclease antibody and the second nuclease inhibitor and placing the cocktail in the *in vitro* translation reaction.

47. The method of claim 45, wherein the second nuclease inhibitor is a second anti-nuclease antibody.

48. The method of claim 45, wherein the second nuclease inhibitor is human placental ribonuclease inhibitor, a bovine ribonuclease inhibitor, a porcine ribonuclease inhibitor, diethyl pyrocarbonate, ethanol, formamide, guanidinium thiocyanate, vanadyl-ribonucleoside complexes, macaloid, sodium dodecyl sulfate, ethylenediamine tetraacetic acid, proteinase K, heparin, hydroxylamine-oxygen-cupric ion, bentonite, ammonium sulfate, dithiothreitol, β -mercaptoethanol, cysteine, dithioerythritol, tris (2-carboxyethyl) phosphine hydrochloride, Mg^{+2} , Mn^{+2} , Zn^{+2} , Fe^{+2} , Ca^{+2} , or Cu^{+2} .

49. The method of claim 37, further defined as obtaining a lysate and employing the lysate in the *in vitro* translation reaction.

50. A kit comprising a nuclease inhibitor and components for an *in vitro* translation reaction.